Prospective Study of Breakfast Eating and Incident Coronary Heart Disease in a Cohort of Male US Health Professionals

Cahill LE, Chiuve SE, Mekary RA, et al. Circulation 2013;128:337-43

Conclusions: Eating breakfast is associated with significantly lower coronary heart disease risk in a cohort of male health professionals.

Summary: It is commonly stated breakfast is the most important meal of the day. There are, however, no evidence-based recommendations for adults in terms of eating habits. The 2002 National Health and Nutrition Examination Survey found that 18% of Americans skip breakfast and 86% snack during the day (Kant AK, Graubard BI, Am J Clin Nutr 2006;84:1215-23). However, preliminary cross-sectional studies and small prospective studies suggest some eating habits, such as skipping meals, are associated with adverse cardiometabolic health outcomes such as overweight, weight gain, dyslipidemia, insulin sensitivity, and diabetes (van der Heijden AA et al, Obesity 2007;15:2463-9; and Jenkins DJ, N Engl J Med, 1989;321:929-34). Previously, there have not been human studies of eating habits in coronary heart disease. The objective of this study was to prospectively determine any relationship between eating habits, including skipping breakfast, and possible relationships to rates of coronary heart disease. Eating habits were assessed in 1992 in 26,902 American men age 45 to 82 years in the Health Professionals Follow-up Study. All subjects were initially free of known cardiovascular disease and cancer. The Health Professionals Follow-up Study is a prospective study of 51,529 male health professionals (dentists, veterinarians, pharmacists, optometrists, osteopaths, and podiatrists) aged 40 to 75 years at enrollment in 1986. About 97% of participants are of white European decent. Follow-up has been through mailed biennial questionnaires ascertaining medical history, lifestyle, and health-related behaviors. During 16 years of follow-up, 1527 incident coronary heart disease cases have been diagnosed. Cox proportional hazards models were used to estimate relative risks and 95% confidence intervals (CIs) for coronary heart disease. Data are adjusted for demographic, diet, lifestyle, and other coronary heart disease risk factors. Men who skipped breakfast had a 27% higher risk of coronary heart disease compared with men who did not (relative risk, 1.27; 95% CI, 1.06-1.53). Compared with men who did not eat late at night, those who ate late at night had a 55% higher coronary heart disease risk (relative risk, 1.55; 95% CI, 1.05-2.29). Associations were mediated by body mass index, hypertension, hypercholesterolemia, and diabetes mellitus. No association was observed between eating frequency (times per day) and risk of coronary heart disease.

Comment: It is known omitting breakfast impairs serum lipid and postprandial insulin sensitivity (Farshchi HR et al, Am J Clin Nutr 2005;81:388-96). This study extends such basic metabolic observations to more clinically relevant clinical end points. The study indicates the benefit of breakfast consumption for prevention of coronary events. On the basis of the data here, further studies are obviously needed, but the current data would support a recommendation of daily breakfast eating by males in health professions to help prevent coronary heart disease and improve individual and population health levels.

Reduction in Early Stroke Risk in Carotid Stenosis With Transient Ischemic Attack Associated With Statin Treatment

Merwick Á, Albers GW, Arsava EM, et al. Stroke 2013;44:2814-20.

Conclusions: In patients with acute symptomatic carotid stenosis, statin pretreatment is associated with reduced stroke risk.

Summary: Carotid endarterectomy (CEA) in patients with associated symptoms is highly effective for secondary stroke prevention. Maximum benefit appears to be in those who undergo surgery ≤2 weeks of symptom onset; however, the safety of very early CEA has been questioned. Data from the Swedish Vascular Registry indicated an 11.5% stroke and death rate in patients undergoing CEA ≤48 hours of symptom onset. This is a fourfold increase in the odds of a poor outcome compared with those undergoing CEA from 3 to 7 days (Strömberg S et al, Stroke 2012;43:1331-5). In patients with acute coronary syndromes, statin medications appear beneficial for secondary vascular prevention secondary to their plaque-stabilizing effects. There are, however, few data for patients with unstable carotid stenosis addressing early stroke recurrence and statin pretreatment at the time of symptoms or statins begun acutely after symptoms. The authors hypothesize that statin pretreatment at transient ischemic attack (TIA) onset would be associated with reduced early stroke risk in patients with TIA and carotid stenosis and that this would include those awaiting CEA. The authors analyze data from 2770 patients with TIAs from 11 centers; 387 had ipsilateral carotid stenosis. ABCD2 (age ≥60 years; blood pressure ≥140/90 mmHg at initial evaluation; clinical features of the TIA; duration of symptoms, and diabetes mellitus) scores, diffusion-weighted imaging results, medication pretreatment, and early stroke were recorded. In patients with carotid stenosis, the 7-day stroke risk was 8.3% (95% CI, 5.7%-11.1%) compared with 2.7% (95% CI, 2.0%-3.4%) in patients without carotid stenosis ($P < .0001$). The 90-day stroke risk was also increased in patients with carotid stenosis (7.8% vs 5.7%; $P < .0001$). In patients with carotid stenosis, the nonprocedural 7-day stroke risk was 3.8% (95% CI, 1.2%-9.7%) with statin treatment at TIA onset. This was compared with 13.2% (95% CI, 8.5%-19.8%) in those not pretreated with statin ($P = .01$), with a 90-day risk of 8.9% vs 20.8% ($P = .01$). Statin pretreatment was associated with reduced stroke risk in patients with carotid stenosis (odds ratio for a 90-day stroke, 0.37; 95% CI, 0.17-0.82) but not with nonstenosis patients (odds ratio, 1.3; 95% CI, 0.8-2.24). Association with reduced stroke risk with statin pretreatment remained with multivariable logistic regression adjusted for ABCD2 scores, smoking, antiplatelet treatment, recent TIA, and diffusion-weighted imaging hyperintensity (adjusted P for interaction = .054).

Comment: The data indicate that in patients with TIAs and carotid stenosis, who do not undergo an early procedure, stroke risk is reduced with pretreatment with statins at the time of TIA onset. Given the controversy involving very early CEA induced by the data from the Swedish Vascular Registry, clinicians electing not to perform very early CEA in patients with recently symptomatic carotid stenosis may be able to reduce early stroke risk in those not subject to CEA by ensuring that their patients are on a statin medication.